

Correlates of *Campylobacter* incidence among FoodNet sites

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Background: Data collected over the past decade from nine Foodborne Diseases Active Surveillance Network (FoodNet) sites show a consistently high incidence of laboratory-confirmed *Campylobacter* cases in the California Bay area. Case control studies and outbreak analyses suggest that *Campylobacter* infections are associated with consumption of poultry, contaminated water, milk, and other meats. An ecological analysis was performed to determine if these and other foods contribute to sporadic (i.e. non-outbreak) *Campylobacter* cases.

Methods: This study utilized data from the 2002 CDC FoodNet Population Survey summary and the 2002 FoodNet surveillance summary of *Campylobacter* cases. Chi-square tests identified 27 out of 107 food and water variables that differed between California Bay area residents and residents of other FoodNet sites. Ecological associations between these 27 variables and *Campylobacter* incidence were determined using Spearman correlation coefficients (r).

Results: We did not find any significant differences between living in California and consumption of poultry, contaminated water, milk, and other meats. Statistically significant associations ($p < 0.05$) were found between living in California and consumption of a variety of fresh fruits and vegetables, cheeses, nuts, cilantro, raw fish, and lamb. Correlation analysis suggests that *Campylobacter* in FoodNet sites is positively associated with consumption of raw apples ($r = 0.883$; $p = .0031$), raw berries ($r = 0.8619$; $p = .0047$), raw alfalfa sprouts ($r = 0.817$; $p = .0108$), and walnuts ($r = .8667$; $p = .0045$).

Conclusions: We did not find any geographical difference between consumption of any previously identified risk factors, including poultry, contaminated water, milk, and other meats, that would explain geographical differences in *Campylobacter* infection. This study noted increased consumption of other foods in California and their significant associations with *Campylobacter* infection. Further studies are needed to determine if these food items may contribute to sporadic *Campylobacter* infection.